

# **IDAHO**

## **DEPARTMENT OF FISH AND GAME**

**Jerry M. Conley, Director**

**CLARK FORK HATCHERY**

**Annual Report**



**1 October 1983 - 30 September 1984**

**by**  
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## CLARK FORK HATCHERY

### Annual Report

#### ABSTRACT

The kokanee run was smaller this year, starting on November 2, 1983, and ending on December 22. Spawning crews consisting of personnel from Mullan, Clark Fork and Sandpoint hatcheries took 6,328,000 eggs. These eggs were split among the three northern hatcheries. The spawning run was approximately 45% smaller than the previous year. A record run is expected next year.

The wild kamloop operation was unsuccessful this year. Only two females were caught by hook and line after over 20 hours of effort. One large male kamloop was captured in Spring Creek with a seine. All of the fish captured were in excess of 20 pounds; one female partially spawned in the pond, the other one never ripened up. We took 3,672 remaining eggs from the partially spawned female. All of the adults were later released back into Spring Creek.

During May and June, hatchery personnel took 1,321,000 eggs from the hatchery's three- and four-year-old westslope cutthroat broodstock, with an average eye-up of 74%. Approximately 800 four-year-old westslope broodstock were transported to the hatchery from Yellowbanks Creek, a tributary to Hayden Lake. We took 456,000 eggs from these fish and shipped them green to the Sandpoint Hatchery. The adult cutthroat were of poor quality, resulting in a low egg take of poor quality eggs. Seven thousand, eight hundred and twenty-four (7,824) eggs were taken and transported to the Sandpoint and Clark Fork hatcheries.

From April through September, the hatchery planted 68,222 catchable rainbow weighing 16,267 pounds. These fish were transferred from the Grace and Hayspur hatcheries. The hatchery also planted 286,000 westslope cutthroat fingerlings in the tributaries of Priest Lake. Ten thousand were released into the spawning channel at the hatchery.

Clark Fork Hatchery also planted 175 four-plus cutthroat in Jewel Lake after they were spawned. The hatchery planted 2,035,673 kokanee fry--1.38 million at Sullivan Spring and 645,000 at the future Cabinet Hatchery site on the Clark Fork River.

Hatchery personnel assisted Bill Carter in planting mountain lakes again this year.

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## OBJECTIVES

The objectives of the Clark Fork Hatchery are:

1. To raise westslope cutthroat broodstock and plant 350,000 size 2 cutthroat annually.
2. To take as many kokanee eggs as possible and plant 3.5 million size 1 late kokanee annually.
3. To redistribute catchable rainbow trout to streams, lakes and reservoirs of Region 1.

## INTRODUCTION

Clark Fork Hatchery is located approximately 1.7 miles north of the town of Clark Fork on Spring Creek Road. It receives its water supply from Spring Creek and requires 8 cfs of water to operate. The hatchery has four large raceways measuring 12' x 319', three sections per raceway with approximately 2,470 cubic feet per section. With all four in operation, the hatchery has a flow of 1.45 cfs per pond. There are two medium-sized raceways measuring 6' x 116' and six small raceways measuring 6' x 53' with 540 cubic feet capacity and possible flow of .33 cfs. Clark Fork has four earth broodstock ponds, three sections each with 2,202 cubic feet per section and a flow of 1.5 cfs each. In the hatchery building there are 10 concrete vats of 60.5 cubic feet each with a flow of .12 cfs each. There are 17 fiberglass troughs, 16.6 cubic feet each with flows of .025 cfs. The hatchery is capable of raising 40,000 pounds of fish and producing 4,000,000 eggs at capacity annually.

The water flow fluctuates from 11 cfs to a low of 3 cfs during late summer and early fall, resulting in less than full production capabilities. In addition to the hatchery, there is a kokanee trapping facility located at Sullivan Springs on Granite Creek approximately 30 miles from the hatchery site. This facility could produce 10 to 12 million eggs annually.

## FISH PRODUCTION

kokanee (late spawning):

Green eggs	-----	6,328,924	
Eyed eggs	-----	2,248,910	(at Clark Fork)
Shipped	-----	1,845,002	(Sandpoint)
Shipped	-----	2,179,856	(Mullan)
Eye-up %	-----	95%	(at Clark Fork)
Planted	-----	2,035,673	fish to Lake Pend Oreille
		1,517	pounds

westslope cutthroat:

Kings Lake 4 yr.

Green eggs	-----	1,084,918
Eyed eggs	-----	782,360
Eye-up %	-----	72%

Kings Lake 3 yr.

Green eggs	-----	236,189
Eyed eggs	-----	187,267
Eye-up %	-----	79%

Kerr Lake

Green eggs	-----	7,824
Eyed eggs	-----	3,672
Eye-up %	-----	46%

Yellowbanks

Green eggs	-----	456,000 (sent to Sandpoint Hatchery)
Eyed eggs	-----	197,501 (received from Sandpoint)

wild Kamloop

Green eggs	-----	3,672
Eyed eggs	-----	3,660
Eye-up %	-----	99%

#### FISH HEALTH

The following disease problems were diagnosed at the Clark Fork Hatchery this past year:

Systemic bacteria, Epitheliocystis, Myxobacteria, Ich and Sanquinicola in the cutthroat. Bacterial gill disease, IPN and BKD were diagnosed in our cutthroat broodstock.

The hatchery lost approximately 370,000 westslope cutthroat sac fry in the incubators due to unknown causes. New Flex-a-Late incubators were being used and are suspected as a cause.

Joe Leintz at the Dworshak Fish Disease Lab has been helpful to us this year running tests and performing disease diagnostic work. The hatchery has not had any major mortality due to disease this year, and the fish appear to be in good health at years end.

#### FISH TRANSFERRED

Clark Fork transferred approximately 3,500 wild kamloop fry to the Sandpoint Hatchery this year.

## FISH RECEIVED

Approximately 800 westslope cutthroat were transported to the hatchery from Yellowbanks Creek of Hayden Lake. These fish were spawned and later returned to Hayden Lake. Seventy-two thousand (72,000) catchable rainbow were received from the Grace and Hayspur hatcheries to be transplanted to lakes and streams.

Approximately 1,300 Kootenai rainbow broodstock were transferred in from the Hayden Creek facility.

In September, 24,053 westslope cutthroat fry were received from the McCall Hatchery for use as future broodstock.

## FISH RELEASES

Table 1. Fish releases for Clark Fork.

Species	Number	Pounds	Location
R1 catchables	68,222	16,267	Lowland lakes, streams
C2 fingerling	286,500	9,102	Priest Lake, Spring Cr.
C2 broodstock	175	262	Jewel Lake
KL fry	2,035,673	1,517	Clark Fork River, Sullivan Springs
TOTALS	2,390,570	27,148	

## SPAWNTAKING OPERATIONS

At Clark Fork Hatchery:

C2 4-year-old fish	1,084,918 @ 351/oz.
C2 3-year-old fish	236,189 @ 401/oz.
C2 Yellowbanks	456,000 @ 264/oz.
C2 Kerr Lake	7,824 @ 216/oz.
K2	3,672 @ 153/oz.

At Sullivan Springs:

KL	6,328,924 @ 274/oz.
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## FISH FEED UTILIZED

Table 2. Fish feed utilized at Clark Fork.

Type	Size	Pounds	Cost
Dry	1/4	350	--
Moist OP4	all sizes	22,850	10,324.5
Moist experimental	#2 and #3	100	44.08

## HATCHERY IMPROVEMENTS

The residences were upgraded this year. New carpet was installed in bedrooms and hallways of residences 1 and 2. A new airtight woodstove was installed along with a large storm window at residence 2. Residence 3 received new vinyl floor covering for the kitchen.

Two of the earth brood ponds had fresh gravel spread in the bottoms full length.

Peeling paint was scraped and various buildings were spot painted. The old crew quarters were renovated into office space and for use as a future microscope room.

The railing at the entrance was replaced with poles.

## HATCHERY NEEDS

A new head box structure at the city pond is high on the list of hatchery needs. A vital need is high and low water alarms installed at various sites around the hatchery due to rapid water level fluctuations. Some sort of security around the hatchery grounds is necessary to offset the annual theft of fish. New incubators are needed at Clark Fork; the lids on the existing trays don't seal and fish leak out soon after hatching.

## MISCELLANEOUS

The hatchery had good luck this year during the kokanee spawning operation at Sullivan Springs. The Naval Research Station at Bayview provided us with transportation to and from the spawning operation. They had large boats and good communications and provided all of the fuel and maintenance; things went quite smoothly. We had quite a variety of personnel manning the trap this year: Boise and Nampa staff, Region 1 people and the regular hatchery crews.

There were two extraordinary fish losses that occurred this year. The first occurred with the theft of 600 of our four-year-old broodstock right after they were spawned. The second loss occurred during the initial use of new Flex-A-Lite incubator baskets. A loss of approximately 370,000 cutthroat sac fry occurred soon after hatching. As a result, hatchery personnel are reluctant to use the trays again.

The hatchery experienced some low water problems this summer and fall. There was a three-month stretch without rain and the city of Clark Fork took the lions share of the water. The city water line broke and crews spent most of the summer working on it. They would either send down a large amount of s i l t and algae, or they would shut the water off to the hatchery building. Luckily, enough water could be drawn from the other small spring to get by. It took several trips to the city council, the mayor, the city clerk and the workmen themselves to finally convince them to be careful or to at least give the hatchery some advance warning.

An attempt was made to capture and spawn fall chinook salmon in Wolf Lodge Creek, tributary to Coeur d'Alene Lake. In three attempts, personnel captured 130 fish, of which 17 were spawned. The rest were either males or spawned-out females. Approximately 50,000 eggs were taken and sent to the Mullan Hatchery.

#### **ACKNOWLEDGEMENTS**

Hatchery staff for the year included:

Gene McPherson, Fish Hatchery Superintendent II; Alan Williams, Fish Hatchery Superintendent I; Bruce Thompson, Fish Culturist; Doug Ramsey, Fish Culturist; Carol Craig, Laborer and David Sjoden, CETA.